

REVIEWS

The Agaves of Baja California. By HOWARD SCOTT GENTRY. 119 pp., frontis. + 6 pls, 62 figs., 11 tables. Occasional paper 130, Calif. Acad. Sci., San Francisco. 1978. ISSN 0068-5461. \$8.00.

This is the long-awaited companion volume to Gentry's *The Agave Family in Sonora* (U.S.D.A., Agricultural Research Service, Agriculture Handbook 399, 195 pp. 1972. Washington, D.C.). Because both volumes are concerned primarily with the agaves of the Sonoran Desert, one would think that there would be considerable overlap of species, but such is not the case: only one taxon occurs in both Baja California and Sonora. This high degree of endemism among peninsular agaves may be accounted for by geological isolation—not only because of the Gulf of California trough, but also by what Gentry terms upper Tertiary and Pleistocene "seaways" on the peninsula itself.

For Sonora, Mexico, Gentry recognized 18 species of *Agave*, of which only *A. deserti* occurs in Baja California where it is found north of Lat. 30°N. The closely related *A. subsimplex* (which is included in both treatments) occurs on Isla Tiburón and adjacent coastal Sonora, but does not cross over onto the peninsula. In his Baja California monograph, Gentry treats 16 species, two of which (*A. subsimplex* and *A. mckelveyana*) do not occur within the political boundaries of Baja California, but because of their close taxonomic and geographic relationship to *A. deserti*, are included in this volume. For a discussion of Dr. Gentry's species concept in this plastic group of arid region plants one has to refer to his treatment of *Agave* in Sonora. His extensive field observations over the past thirty years form much of the basis for his taxonomic concepts. The Baja California agaves are divided into four groups: Deserticolae, Campaniflorae, Umbelliflorae, and Datyliones. The majority of the taxa fall into the Deserticolae. Four species and eight subspecies are proposed as new.

In addition to excellent habitat and habit photographs of the taxa treated, for each group there are included comparative diagrams of longitudinal sections of the flowers as well as floral ideographs depicting relative proportions of the tube to the outer tepals and the level of insertion of the filaments. Other ideographs indicate clearly the period of flowering in relation to seasonal rainfall. This is an interesting comparison because, although agaves occur the entire length of the peninsula, those in the north are more apt to be subjected to winter rains and those in the south to late summer tropical storms. Some taxa flower following winter rains and may continue blooming into June; many flower at the height of the dry season; and a few come into flower with the advent of the late summer rainy season. In some cases, this difference in flowering period is an important criterion for distinguishing taxa. The volume is further enhanced by a frontispiece and six plates in color.

For each taxon are included synonymy, detailed description, a distribution map (except for *A. datylio*), and discussion of distribution, variability, and relationships. In addition are included detailed information on economic values, e.g., saponin content of various parts of the plant, fiber yield, and even edibility—the latter relating primarily to the use of these plants by indigenous Baja Californians. The roasted *Agave cabeza* was one of their principal food resources. Following the taxonomic treatment is citation of all specimens studied. Also at the end is a two-page glossary of special terms applicable to agaves, a very useful feature for those not too familiar with these desert plants.

In his treatment of *Agave* in *Flora of the Sonoran Desert*, Ira Wiggins makes the following apology: "The treatment of the genus is dishearteningly inadequate. . . . A reasonably acceptable classification of the genus *Agave* can be presented only after extensive and painstaking study in the field, prosecuted at all seasons of the year." Such a study has been achieved by Dr. Gentry. Now we can have a much better appreciation of these plants that are such a conspicuous and important part of our desert vegetation, and, with some effort on our part, be on speaking terms with them.—ANNETTA CARTER, Herbarium, Department of Botany, University of California, Berkeley 94720.